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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,914	12/21/2006	Carl Formstone	PPD 70278	1073

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SYNGENTA CROP PROTECTION, INC.  
PATENT AND TRADEMARK DEPARTMENT  
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GREENSBORO, NC 27409

EXAMINER
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METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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10/01/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

department-gso.patent@syngenta.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,914	<b>Applicant(s)</b> FORMSTONE ET AL.	
	<b>Examiner</b> Daniel S. Metzmaier	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12/21/2006 & 06/26/2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/20/05 &amp; 6/26/07</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

Claims 1-27 are pending.

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Great Britain on 28 May 2003, GB 0312195.1. It is noted, however, that applicant has not filed a certified copy of the Great Britain application, GB 0312195.1, as required by 35 U.S.C. 119(b). An attempt to obtain the priority document online via <http://www.wipo.int/pctdb/en/index.jsp> was made but the priority document was not online or available at the time of this Office Action.

### ***Oath/Declaration***

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

The fifth inventor citizenship has been changed without initialing. It is unclear who made or when the change was made.

### ***Specification***

3. The abstract of the disclosure is objected to because the abstract should be in narrative form and generally limited to a single paragraph **on a separate sheet** within the range of 50 to 150 words.

Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 7 and 17 contain an improper alternative grouping. If applicants intend to employ the language: “. . . at least one member selected from the class . . .”, the conjunction should be “and” rather than “or”. Furthermore, it is unclear if esters of alkyl, aralkyl or aryl compounds are intended or alternatively applicants intend alkyl solvents, aralkyl solvents or esters of organic acids with aryls.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Feldmann et al, US 3,210,248. Attention is directed to example 14, which employs antifoam AF emulsion in a topical cream having 30 parts/100 total parts of isopropyl myristate. Antifoam AF is characterized therein as a “. . . water dilutable dispersion of 30 % Antifoam A, an organosilicone oxide polymer, obtainable from Dow-corning Corp. Midland, Mich.”, *i.e.*, silicone polymer.

Regarding claim 2, the Antifoam A would have been inherently soluble in the isopropyl myristate at least at 10 % by weight at a temperature in the range of 15 - 20° C. Regarding claims 6-8, isopropyl myristate has a flash point of about 164° C (closed cup).

8. Claims 1-4, 6, 9-14, 16, 19, 21, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun et al, US PGPUB 2003/0072776. Sun et al (abstract, examples and claims) disclose emulsifiable concentrate compositions with silicone antifoams.

Sun et al (paragraph [0079]) discloses the emulsifiable concentrates may be diluted with water to the desired solids content and the concentration of the actives in the final formulation of about 1 to about 95 weight %. The amount of antifoam in the EC formulation is present to deliver about 1 to 200 ppm to the spray mixture upon dilution and use.

Sun et al exemplified the use of Aromatic 100 and aromatic 150. Aromatic 100 inherently has a flash point of ~ 41° C, which is greater than 40 °C as claimed (Instant claim 6). Aromatic 150 inherently has a flash point of ~ 66° C, which is greater than 40 °C as claimed (Instant claim 6).

The Sun et al compositions contain water and phosphate esters, which would inherently function as bioperformance enhancing agents.

9. Claims 1-6, 9-16 and 19-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Atkinson et al, US 6,162,764. .

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Atkinson et al (abstract; examples @ columns 3-5, lines 65-50; and claims) teach a stable premixture composition which remains soluble or emulsifiable prior to mixing with pesticides includes an aliphatic solvent, an emulsifier, a phosphate ester, water conditioner and/or a polyacrylate dispersant, an antifoam agent, and a polyacrylamide drift reduction agent.

Atkinson et al (columns 3-5, lines 65-50; particularly columns 3-4, lines 65-21) discloses compositions that are pre-emulsified and mixed with an aqueous agrichemical composition. Atkinson et al (column 5, lines 31-35) discloses antifoams. Said antifoams inherently include those having hydrophobic silica. The solubility of the antifoam in solvent, flash point of the solvent and density properties for the antifoam compositions would have been inherent to the Atkinson et al compositions. The phosphate ester and/or amine emulsifiers read on the claimed bioperformance enhancing agents.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 5, 7, 17 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al, US PGPUB 2003/0072776. Sun et al (abstract, examples and claims) disclose emulsifiable concentrate compositions with silicone antifoams.

Sun et al (paragraph [0079]) discloses the emulsifiable concentrates may be diluted with water to the desired solids content and the concentration of the actives in the final formulation of about 1 to about 95 weight %. The amount of antifoam in the EC formulation is present to deliver about 1 to 200 ppm to the spray mixture upon dilution and use.

Sun et al exemplified the use of Aromatic 100 and aromatic 150. Aromatic 100 inherently has a flash point of  $\sim 41^{\circ}\text{C}$ , which is greater than  $40^{\circ}\text{C}$  as claimed (Instant claim 6). Aromatic 150 inherently has a flash point of  $\sim 66^{\circ}\text{C}$ , which is greater than  $40^{\circ}\text{C}$  as claimed (Instant claim 6).

Sun et al differs from the claims in the sufficiency of the disclosure and/or the exemplified incorporation of hydrophobic silica into the exemplified compositions (instant claims 5 and 15), the sufficiency of the disclosure and/or the exemplified use of esters as the solvent (instant claims 7 and 17), or the order of adding other ingredients in the methods (instant claims 24-27).

Sun et al (paragraph [0077]) discloses other additives may optionally be incorporated into the formulations including hydrophobic filler, such as silica. The use of hydrophobic silica is notoriously well known to be incorporated into silicone antifoam compositions.

Sun et al (paragraph [0073]) discloses the solvents employed in the emulsifiable concentrates including fatty acid esters that read on the compounds claimed in claims 7 and 17.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ hydrophobic silica as the disclosed optional additive as taught in the Sun et al reference for the hydrophobic silicas' antifoaming efficacy. It would have also been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ esters of fatty acids as taught and further suggested in the Sun et al reference for the advantage of the particular desired end use of the antifoam composition.

To the extent that the order of adding other ingredients in the methods of Sun et al differs from the instant claims (claims 24-27), the "(selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930)". See MPEP 2144.04(IV)(C) and case law cited therein.

13. Claims 1, 5-9 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al, US PG PUB 2003/0072776, as applied to claims 1-14, 16-17, 19, 21, and 23-27 above, and further in view of Pirson et al, 4,338,217.



Sun et al, US PGPUB 2003/0072776. Sun et al (abstract, examples and claims) disclose emulsifiable concentrate compositions with silicone antifoams as set forth in the above anticipation and obviousness rejections.

Sun et al differs from the claims in the sufficiency of the disclosure and/or the exemplified incorporation of hydrophobic silica into the exemplified compositions (instant claims 5 and 15) or the sufficiency of the disclosure and/or the exemplified use of esters as the solvent including isopropyl myristate (instant claims 6-8 and 16-18).

Sun et al (paragraph [0010] et seq and claims) discloses alkyl (alkoxyether) silicone antifoams and discloses silica as an optional ingredient.

Sun et al (paragraph [0073]) discloses the solvents employed in the emulsifiable concentrates including fatty acid esters that read on the compounds claimed in claims 7 and 17 but differ from claims 8 and 18 in the specific alkyl ester with specific fatty acid.

Pirson et al (abstract and claims) disclose antifoams comprising alkyl (alkoxyether) silicone and (column 2, lines 10-21 and 35-37) hydrophobic silica as pyrogenic silica or silica treated with trimethoxysilanes.

The Pirson et al (column 4, lines 3 et seq) antifoam compositions having related alkyl (alkoxyether) silicones are furthermore closely related to the Sun et al antifoam compositions. The Pirson et al antifoams may further be combined with emulsifiers and/or protective colloids to aid in the dispersibility of the antifoams at the point of application, *i.e.*, aqueous systems (column 1, lines 4-7).

Pirson et al (column 3, lines 48 et seq; particularly lines 63-64) disclose the antifoams comprising (alkoxyether) silicone and hydrophobic silica may further contain

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liquids other than the organopolysiloxanes (alkyl (alkoxyether) silicones) including esters of carboxylic acids and monovalent alcohols, such as isopropyl myristate, as additives known in the art in preparing antifoams.

These references are combinable because they teach related emulsifiable compositions comprising related antifoam compositions and common additives therefore. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ hydrophobic silica and isopropyl myristate in the compositions of the Sun et al reference as art recognized additives in preparing compositions comprising antifoams for their advantageous antifoaming efficacy.

14. Claims 1, 3-6, 9-11, 13-16 and 19-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al, US 6,403,163.

Fisher et al (abstract) teach compositions for rendering surfaces water repellent formed by combining water or a solvent, a methylhydrogensiloxane polymer or copolymer, an alkoxy silane, and a silicone resin. The composition can also contain other components such as a volatile methyl siloxane, a surfactant, a catalyst, a mildewcide, etc.

Fisher et al (column 1, lines 1 et seq) discloses a number of aqueous composition components that read on the claimed solvent including but not limited to volatile methyl siloxane and ethylene glycol as a freeze-thaw additive.

Fisher et al differs from the claims in the sufficiency of the disclosure and/or the exemplified incorporation of the first (hydrophobic silica), third (microbiocides), fourth

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(silicone antifoams) and/or fifth (mildewicides including algicides, antimicrobials, bactericides, or fungicides) optional additives into the exemplified compositions.

Fisher et al (column 6, lines 7 et seq) discloses optional additives including as the first optional additive the incorporation of hydrophobic silica; as the third optional additive (column 6, lines 25 et seq) the incorporation of microbiocides; as the fourth optional additive (column 6, lines 34 et seq) the incorporation of silicone antifoams, such as silica filled polydimethylsiloxane; as the fifth optional additive (column 6, lines 41 et seq) mildewicides including algicides, antimicrobials, bactericides, disinfectants, and fungicides.

Fisher et al (column 7, lines 33 et seq) discloses the compositions may be made by merely mixing the ingredients together in the form of an emulsion by: (i) making an emulsion of several ingredients, (ii) making several emulsions containing one or more ingredients, and combining the several emulsions, and (iii) following the procedure of (i) and (ii) and then adding some ingredients directly to water.

It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to incorporate the optional additives as specifically taught in the Fisher et al reference for their advantageous art taught and recognized functions.

The solubility of the antifoam in solvent, flash point of the solvent and density properties for the antifoam compositions would have been obvious to those with ordinary skill in the art at the time of the invention for the advantage of stability, homogeneity and safety. The phosphate ester and/or amine emulsifiers read on the claimed bioperformance enhancing agents.

***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. WO 03/065803 A2 is considered cumulative to the above rejections and qualifies as prior art under 35 U.S.C. 102(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Daniel S. Metzmaier/  
Primary Examiner, Art Unit 1796**

DSM